**ST. XAVIER’S COLLEGE**

**(Affiliated to Tribhuvan University)**

**Maitighar, Kathmandu**

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**Database Management System**

**Theory Assignment #11**

**SUBMITTED BY:**

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**SUBMITTED TO**

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11.1. Transaction Management

### Introduction

A Transaction is a collection of operations that performs a single logical function in a database application. Transaction manager takes care for identifying the transaction and their proper execution. It is responsible to provide features like atomicity, concurrency control etc.

* A transaction is a collection of operations that performs a single logical function in a database application
* Transaction­ management component ensures that the database remains in a consistent (correct) state despite system failures (e.g. power failures and operating system crashes) and transaction failures.
* Concurrency ­control manager controls the interaction among the concurrent transactions, to ensure the consistency of the database.

### Transactions

### A transaction consists of sequence of query/ or updateable statements.

### SQL standard specifies, the transaction begins implicitly when SQL statement is executed and one of the following SQL statements must end with transaction commands.

### Transaction Recovery

### System Recovery

### Media Recovery

### Two-phase Commit

### SQL Facilities

### Reference:

### [1] TL Paneru, Integrity constraints, PDF, Available under DBMS section: <https://drive.google.com/file/d/0B6sGyhABc5XENGFxeERwWlVqRXc/view>

### [2] Relational Database Design, “Decomposition”,PDF, Available: <https://drive.google.com/file/d/0B6sGyhABc5XEeVNXTWNhQV9JMG8/view>

### [3] SZTakiWeb, PDF, Available: <http://www.sztaki.hu/~fodroczi/dbs/dep-pres-own.pdf>